

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (Currently amended) ~~An overlay routing processor for transferring information~~  
2 ~~over a computer network, wherein the computer network has a native routing~~  
3 ~~protocol, the overlay routing processor comprising:~~  
4 A method comprising performing a machine-executed operation involving  
5 instructions, wherein the machine-executed operation is at least one of:  
6 A) sending said instructions over transmission media;  
7 B) receiving said instructions over transmission media;  
8 C) storing said instructions onto a machine-readable storage medium; and  
9 D) executing the instructions,  
10 wherein said instructions are instructions which, when executed by one or more  
11 processors, cause:  
12 ~~instructions for associating computer on the computer network with a~~  
13 ~~given overlay group;~~  
14 receiving a signal, originating from a sender, which indicates an intention  
15 of the sender to send packets to an overlay group that includes a set  
16 of computers;  
17 determining whether the sender has permission to send packets to the  
18 overlay group;  
19 if the sender has permission to send packets to the overlay group, then  
20 performing the steps of:  
21 ~~instructions for determining whether received information a~~  
22 received packet, from the sender, is associated with the  
23 given overlay group;  
24 ~~instructions for determining, for each computer associated with the~~  
25 ~~overlay group, whether to send the received packet to a~~  
26 particular the computer, in the set of computers, via a  
27 multicast connection or a unicast connection based, at least

28                    ~~in part, on data indicating is to be transferred the~~  
29                    ~~information using multicasts or unicasting based on a~~  
30                    ~~request from the computer indicating a transport preference~~  
31                    of the particular computer;  
32                    instructions for upon determining that the received packet should  
33                    be sent to the particular computer via the multicast  
34                    connection, routing the received information packet to the  
35                    ~~computers particular computer having requested a multicast~~  
36                    ~~connection using the a native routing protocol to provide~~  
37                    ~~the information send the received packet by multicasting;~~  
38                    and  
39                    instructions for upon determining that the received packet should  
40                    be sent to the particular computer via the unicast  
41                    connection, routing the received information packet to the  
42                    ~~computers particular computer having requested a unicast~~  
43                    ~~connection using the native routing protocol to provide the~~  
44                    ~~information send the received packet by unicasting.~~

1    2-9.    (Cancelled).

1    10.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2           ~~comprising instructions for wherein said instructions, when executed by the one or~~  
3           more processors, further cause:  
4           ~~handling administrative scoping preventing a multicast packet to be blocked at a~~  
5           boundary point, wherein the multicast packet has a network address within  
6           a specified range of network addresses.

1    11.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2           ~~comprising instructions for wherein said instructions, when executed by the one or~~  
3           more processors, further cause:  
4           in response to detecting that an amount of available bandwidth on a network is  
5           below a threshold, ~~serving a plugin modules~~ module thinning a packet

6                    stream, wherein said received packet is part of said packet stream.

1    12.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2           ~~comprising instructions for~~ wherein said instructions, when executed by the one or  
3           more processors, further cause:  
4           placing a limit on the number of transfers between computers for a given ~~portion~~  
5           ~~of information packet.~~

1    13.    (Currently amended) The ~~overlay routing processor~~ method of claim 12, ~~wherein~~  
2           ~~information is transferred between the computers in packets, the overlay routing~~  
3           ~~processor further comprising instructions for~~ wherein said instructions, when  
4           executed by the one or more processors, further cause:  
5           placing a “time-to-live” value in a field ~~in a~~ of said received packet.

1    14.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2           ~~comprising instructions for~~ wherein said instructions, when executed by the one or  
3           more processors, further cause:  
4           preventing the transfer ~~of information~~ of packets between predetermined  
5           computers.

1    15.    (Currently amended) The ~~overlay routing processor~~ method of claim 14, ~~wherein~~  
2           said instructions, when executed by the one or more processors, further cause:  
3           storing one or more addresses that each identify a computer, and  
4           wherein the step of preventing the transfer of packets includes using the one or  
5           more addresses to prevent the transfer of packets to any computer  
6           identified by the one or more addresses.  
7           ~~wherein one or more computers are identified by an address, the overlay routing~~  
8           ~~processor further comprising using the address to prevent the transfer of~~  
9           ~~information between predetermined computers~~

1    16-23 (Withdrawn).

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